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Purpose

To examine the hypotheses of increasing social inequality in childhood overweight and an overall leveling off in the development of overweight during the time period 2000-2008.

Methods

A simple random sample of 1848 children and adolescents 4-14 years of age who participated in The Danish National Survey of Diet and Physical Activity 2000-2002, 2003-2004 and 2005-2008. Parental education was chosen as an indicator of children's socioeconomic status. Children's BMI was calculated using parent-reported weight and height. Classification of overweight and obesity was made according to international age- and gender-specific BMI cut-off values for children and adolescents. In the following, the concept 'overweight' includes obesity. Crude estimates based on weighted population means, logistic regression models and estimated population frequencies were used to analyze trends in overweight and obesity.

Results

Parental education was significantly associated with the prevalence of overweight and obesity (Figure 1). The prevalence of overweight increased significantly in boys of parents with low educational level between 2000-2002 and 2005-2008 (14.1% vs. 21.1%, p=0.02). No changes were found in boys of parents with medium and high educational level (approx.12% during the whole period). The prevalence of overweight among girls of parents with low educational level was high during the whole time period (low: 21.1% vs. medium/high: 12.1%).

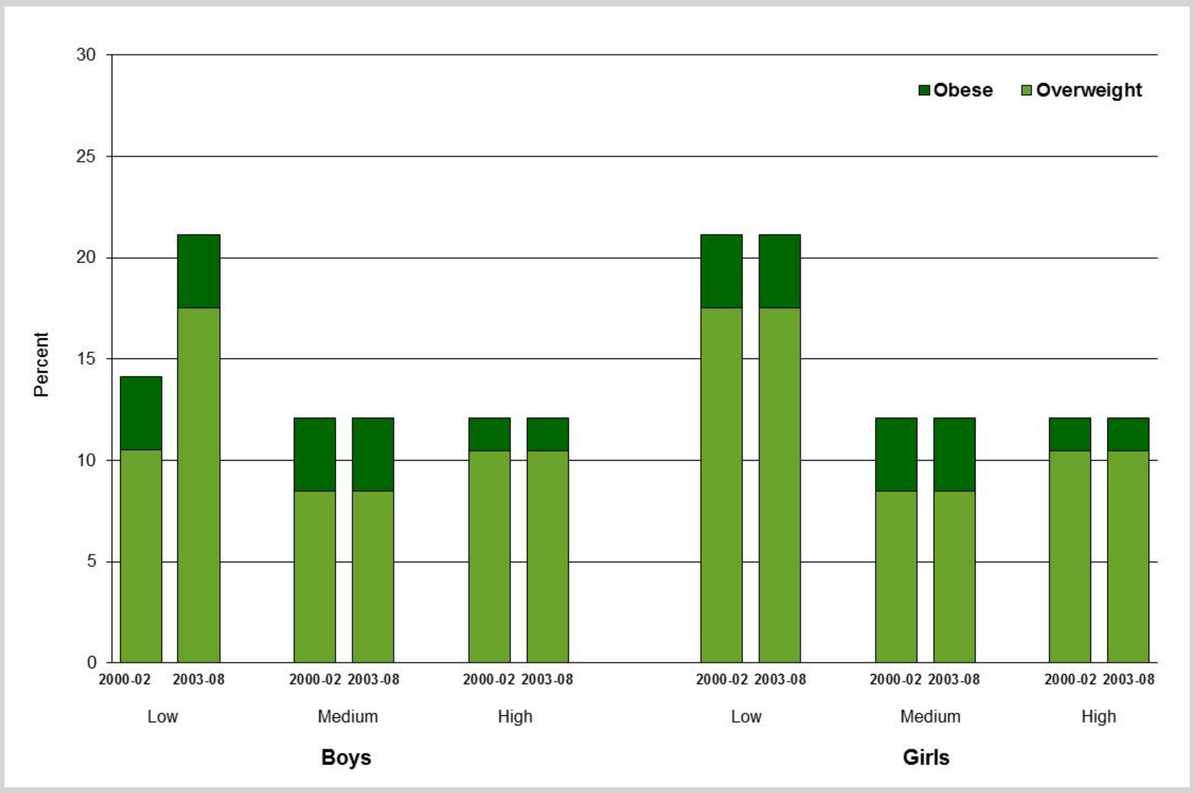

Figure 1: Prevalence of overweight and obesity 2000-2008 of boys and girls 4-14 year according to parental education

The prevalence of obesity was 3.6% for low, compared to 1.7% for high educational levels (p<0.0001) with no difference between genders (p=0.63) or survey years (p=0.89). Consequently, social inequality in overweight in 2005-2008 was high for both genders (21.1% for low education vs. 12.1% for high education, p<0.0001). Analyses on BMI showed overall the same tendencies as for overweight.

A significant increase was found in the crude prevalence estimate of overweight in boys from 2000-2002 to 2005-2008 but not in girls. This change was a result of the increase in the prevalence of overweight among boys of parents with low educational level.

Conclusion

The study showed an increase in the prevalence of overweight among Danish boys of parents with low educational level from 2000 to 2008, leading to increasing social inequality in childhood overweight. For girls the high social inequality in overweight in 2000 persisted throughout the period.

Public health initiatives aimed at preventing and reducing childhood overweight should consider gender differences and especially target boys and their parents with low educational level.


Source: Colourbox

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